6 | Next Steps

In order to execute the policies laid out in Chapter 2, complete the Regional Bikeway Network, and implement other bicycle-related projects and programs needed to create a truly bicycle-friendly Bay Area, a number of steps are needed. These include: ensuring that bicycle facilities are routinely accommodated on all transportation projects; full funding of the Regional Bikeway Network and needed support facilities; improving bicycle safety throughout the region; acknowledging the importance of non-capital investments such as maintenance, operations, and educational and promotional programs; local and regionwide planning; and improved data collection.

1. Routine accommodation

Build on MTC's Routine Accommodation policy (see Appendix C) – which impacts only projects funded by MTC – by encouraging local jurisdictions and other agencies to adopt similar policies for all transportation projects, including those that are locally funded.

2. The Regional Bikeway Network

a) **Complete construction of the Regional Bikeway Network**, including pathways on all Bay Area toll bridges that do not currently permit bicycle access. Allowing cyclists to cross all of the region's toll bridges will provide another travel option on crowded transbay corridors, both for current and future cyclists.

b) Update the Regional Bikeway Network between Plan updates. Although the *Regional Bicycle Plan* is updated between *Regional Transportation Plan* updates, the Regional Bikeway Network (RBN) is constantly changing. To maintain the RBN's usefulness to potential project sponsors and others tracking progress and routing, it needs to be updated at least as frequently as the Regional Transportation Plan (i.e., every four years).

c) Reassess the Regional Bikeway Network. The criteria used to identify the links in the RBN originated in 2001 during the development of the original *Regional Bicycle Plan* (see Chapter 4). However, priorities have changed in the intervening years, and it may be useful to reassess the criteria used to determine which links should be included

in the RBN, and a corresponding analysis to ensure that the resulting network is sufficiently comprehensive. (The updated Regional Bikeway Network described in this plan update reflects RBN projects that have been completed since 2001, but is not the result of a reconsideration of the original criteria.)

This discussion should include the following considerations:

- Whether the Regional Bikeway Network will still be the appropriate focus of regional funding priorities if future regional bicycle investment is focused primarily in Priority Development Areas (PDAs) to achieve *Transportation 2035* performance objectives (see chapter 2 for more discussion of PDAs).
- An analysis of what sort of destinations regional bikeways should serve and the criteria for selecting the best routes for investment.
- The need for the Regional Bikeway Network to serve all types and levels of bicyclists, and the corresponding role of public transit in the RBN.

3. Bicycle safety

Help local jurisdictions improve bicycle safety. MTC could help identify resources to assist Bay Area jurisdictions and other agencies to implement the concepts presented in the Bicycle and Pedestrian Safety Toolbox (see Chapter 3).

4. Maintenance and operations

Identify and develop ongoing bicycle facility operations and maintenance funding. Without regular maintenance, the surface quality of bikeways can be degraded with gravel, glass and cracking. Some bicycle facilities, such as attended parking, require ongoing operations funding. While the previous chapter demonstrated that there may be ample funds for capital projects, particularly on the Regional Bikeway Network, there is a strong need to develop sources of ongoing operations and maintenance funding.

5. Bicycle education and promotion

Identify funding sources to fund bicycle education and promotion programs. These programs encourage people to bicycle for all sorts of trip purposes, teach cyclists how to ride more safely and show motorists how to drive more safely in the vicinity of bicyclists.

Interior of Caltrain bicycle car

6. Multimodal integration

Broaden the transit focus of the *Regional Bicycle Plan for the San Francisco Bay Area*. Future Plan updates could provide detailed transit station bicycle parking inventories; identify gaps between transit stations and the bikeway network; analyze ridership and land-use data to determine where there may be latent demand for bicycle parking at transit stations; and provide bicycle parking-related policy recommendations for transit agencies, including installation guidelines and funding strategies.

7. Comprehensive support facilities and mechanisms

a) Calculate costs beyond construction of the Regional Bicycle Network. The cost to complete the RBN reported in Chapter 5 covers only construction of (and acquiring land, where necessary, for) yet-unbuilt RBN links. Understanding the true cost of a comprehensive regional bikeway system will require calculating other costs, such as local facilities not on the RBN, operations and maintenance of bike facilities, bike parking, outreach and educational programs and way-finding signage.

This task is essential for understanding the true magnitude of regional bicycle needs. Information is by and large available from local agencies. The "Generic Cost Estimating Tool," developed for MTC's Pedestrian Districts Study (2006), could serve as a model for estimating costs that have not already been calculated.

b) Encourage agencies to adopt uniform signage and electronic locker standards.

Signage: Currently, several cities throughout the Bay Area employ the Manual of Uniform Traffic Control Devices (MUTCD), California Supplement-approved SG45 bicycle sign, which includes route number, city logo and destinations. San Francisco was the first agency to adopt the signs in the late 1990s. Since that time, Emeryville, Albany, Oakland and Berkeley have developed citywide signing programs of their own. There are slight variations among cities: For instance, the city of Berkeley has a special signage program for bicycle boulevards that includes purple street signs and extensive way-finding information.

Customized SG45 bicycle sign, City of Albany

It would be valuable to interview agencies with signs currently in place about lessons learned and whether or not there is a need for regional guidelines for bikeway signage. These discussions could evaluate the need for voluntary adoption of a uniform regional add-on to local street signs.

Bicycle lockers: Lockers have long served long-term bicycle parking needs, particularly at transit stations. Several transit providers, including BART and Caltrain, and cities such as Oakland and Palo Alto are beginning to install electronic lockers at select locations. As this technology gains popularity, MTC could convene a regional bicycle locker working group to discuss lessons learned and devise a regional fare structure and fare payment instrument in order to provide continuity for users.

8. Planning

a) Establish benchmarks for plan goals. Goals are much more useful if progress toward them can be measured. While many of the goals in this plan are strong, MTC does not currently have a way to establish progress towards most. Examples of

measurable benchmarks include construction of a certain percentage of the RBN each year; completion of a certain number of bicycle and pedestrian training courses each year; achievement of the federal government's goals to double trips made by bicycling; and achievement of the *Transportation 2035* goal of reducing bicycle fatalities and injuries each by 25 percent from 2000 levels by 2035.

b) Develop criteria for new MTC Regional Bicycle Network Program. In order to use the newly-adopted Regional Bikeway Network program to complete the Network most expeditiously and in the most logical and useful order, criteria are needed that allow funds to prioritize network gaps, high bicycle-use corridors, and locations with high rates of motor vehicle/bicycle collisions.

c) Implement plans for access on the remaining bicycle-inaccessible toll bridges. The findings of the *Project Study Report (PSR) for Bicycle and Pedestrian Access on the Richmond-San Rafael Bridge* and the *Feasibility Report: San Francisco-Oakland Bay Bridge West Span: Bicycle/Pedestrian/Maintenance Path Planning and Feasibility Study* need to be implemented to allow bicycle access on these critical gaps in the Regional Bikeway Network.

d) Develop model practices for considering bicycles in impact analyses. Impact fees exacted from new development are an underutilized resource for the construction of bicycle facilities. These fees are usually a direct outcome of mitigations uncovered through transportation impact analyses. While many agencies have criteria related to motor vehicle impacts, very few have formulated corresponding criteria for bicyclists, pedestrians or public transit.

As MTC discovered when researching the need for a Routine Accommodations policy (see Appendix C), a lack of coordinated planning at the local level can result in a lack of consideration of bicyclists in one department despite policies written to consider them by another. An agency may have an adopted bikeway network or a bicycle plan policy requiring accommodation of bicycles in new development, but the feedback loop to impact analysis requirements may be missing. As a starting point, the next update of the *Regional Bicycle Plan* could offer a simple set of criteria for considering bicycles in new development, the most basic of which would be to consult the local and regional bicycle plans when evaluating site plans and to incorporate future bicycle improvements.

9. Data collection

Improve collection and analysis of bicycle trip-making and collision data. The Bay Area bicycling community is fortunate that MTC considers bicycle trips in its models and forecasts. Nonetheless, as discussed in more detail in Appendix E, there is room for improvement in the analysis of regional bicycle trip-making and collision information currently being collected. In particular, it is important that MTC continues to conduct the Bay Area Travel Survey (BATS) with as large a sample as possible. In counties where more precise bicycle trip information is needed, Bay Area congestion management agencies could pay to add additional surveyed households. In addition, MTC could relatively easily collect data on frequency of bicycle use over a longer time period, say over the past week or month. MTC could also partner with local agencies to perform bicycle counts at

key locations and analyze the results. Bay Area transit operators should be encouraged to always include questions about mode of access on their onboard passenger surveys.

Collision data, too, could be enhanced if MTC analyzed SWITRS crash data currently being collected, and provided an enhanced section of the *State of the System* report. To be useful, such a report would identify trends by examining primary collision factors, party-at-fault, *Vehicle Code* violation codes, and time of day/time of year. In addition to providing jurisdictions with the tools they need to identify safety issues, this effort would help track progress toward MTC's *Regional Bicycle Plan* goals. As stated in Policy 9.2, MTC should encourage Caltrans to purchase additional households for the National Personal Transportation Survey.

Opportunities and constraints

Bicycle transportation has made significant strides in the Bay Area since MTC's adoption of the original *Regional Bicycle Plan* in December 2001. Bicycling has gained broader public acceptance and there are now many more facilities to serve bicyclists, including bike paths and lanes, parking lockers and racks, and bike-carrying racks on buses. The political and social environment that made such strides possible still exists and is now combined with new opportunities that could make it even easier to complete the RBN (see Chapter 4), implement the *Regional Bicycle Plan* and achieve the Plan's principal goal (see box).

On the other hand, a number of challenges and constraints persist that make it difficult to substantially expand the region's bicycle infrastructure and number of bicyclists; indeed, the most vexing constraints – including the volume of motor-vehicle traffic on our roads and the demand for scarce transportation funding and right-of-way – have only become more challenging since 2001, as the Bay Area's population and economy have expanded. Below are listed the most significant constraints to implementing the updated *Regional Bicycle Plan*, followed by a list of the most meaningful opportunities for doing so.

REGIONAL BICYCLE PLAN PRINCIPAL GOAL

To ensure that bicycling is a safe, convenient, and practical means of transportation and healthy recreation throughout the Bay Area, including in Priority Development Areas (PDAs); to reduce traffic congestion and risk of climate change; and to increase opportunities for physical activity to improve public health.

Constraints to plan implementation

There are a number of challenges facing bicycle planners and advocates as they work to ensure that bicycling is a safe, convenient and practical means of transportation and recreation throughout the region.

Scale of region

The Bay Area is large and urban areas are separated by hills and water. Residents often must travel great distances to get to work, school, shopping and other destinations – distances that are beyond the range of most bicyclists and potential cyclists.

Dispersed land-use

The Bay Area experienced its biggest growth spurt during and after World War II when development standards and guidelines required segregating noxious industrial lands from other uses, resulting in "auto-oriented" land-use patterns. Today, in general, the increasing size and dispersal of retail development in suburban areas makes access by bicycle difficult for all but the hardiest.

Constraints to Plan Implementation

- Scale of region
- Dispersed land-use
- Dominance of the automobile
- Built-out cities
- Competition for funds
- Competition for space
- Need for staff training
- Demands on law enforcement

Dominance of the automobile

By far the largest share of trips in the Bay Area – and throughout the U.S. – is made by private automobile. For most trips to most locations, the automobile is still the cheapest and most convenient mode, especially when parking is free or inexpensive and when driving is faster than transit and bicycling. While most jurisdictions in the Bay Area have bicycle-supportive policies, most also have transportation and land-use policies and requirements that work at cross-purposes by fostering sprawl and prioritizing the movement of motor vehicles. Examples include efforts to protect intersection and segment levels of service (LOS) for automobiles by adding additional turn or through lanes.

Built-out cities

The pattern of streets is set in the vast majority of places in the Bay Area. Given that there are limited opportunities to widen urban roadways and that more Bay Area residents rely on driving than on any other mode, it is politically very difficult to reallocate the right-of-way from driving to bicycling. In certain locations, bicycles and transit also compete for roadway space. Given the Bay Area's density and largely built-out nature, creating additional right-of-way for bicycling facilities is expensive and sometimes infeasible.

Competition for funds

Despite having a relatively healthy and productive economy and well-off population, the Bay Area does not have enough funds for all of the transportation projects being pursued. Much of the funding available goes into merely maintaining existing roads and transit facilities. Expansion projects are becoming rarer and more expensive as material and right-of-way costs soar. This is as true for

bicycle facilities as for other projects. Closing many of the key remaining gaps in regional bicycle facilities will require substantial construction costs and land purchases.

Competition for space

As population and traffic have increased, roadway space has not, resulting in increased competition and inevitable conflicts. Drivers are often unaware (or don't care) that bicyclists can use any roadway unless explicitly prohibited. (And many bicyclists, unfortunately, don't always follow traffic rules as required by law.) This competition often discourages potential bicyclists by making the most convenient routes appear less safe while alternative routes can be longer and take more time.

Need for staff training

There is often limited understanding of bicycle design standards and best bicycle design practices on the part of public agency staff responsible for designing the region's transportation facilities.

Demands on law enforcement

Contributing to some motorists' and bicyclists' lack of adherence to traffic laws is the pressure on police officers to prioritize enforcement of more serious crimes.

Opportunities for plan implementation

Relationship to global climate change

More than ever before, there is an awareness of the environmental benefits of bicycle transportation (and, therefore, the disadvantages of car dependence). These benefits include less air, water and noise pollution in the short-term, and the opportunity for the bicycle to play an important role in reducing long-term global climate change.

Link to public health

The opportunity to make connections between the bicycle and public health issues is growing. Because a great deal of research attention is being paid to the negative health effects of the nation's generally low levels of physical activity, partnerships between bicycle planners and public health professionals may increase funding opportunities for needed bicycle research.

Opportunities for Plan Implementation

- Relationship to global climate change
- Link to public health
- Understanding of transportation/land-use relationship
- Supportive policies in place
- Innovative policies on the horizon
- Adopted bicycle plans
- Large and active advocacy community
- Viable transit network
- New trail opportunities
- Bikable destinations
- Political support
- Creativity and experimentation

Understanding of transportation/land-use relationship

Closely related to the previous points, there is greater awareness of the disadvantages of auto-dependent development and, conversely, of the benefits of transit-oriented, mixed-use and infill development, all of which can encourage bicycling. This awareness is resulting in more of such development, allowing more people to incorporate bicycling into their lifestyle.

Supportive policies in place

Practically all local governments in the Bay Area have policies in their general plans and in other planning documents to encourage bicycling. Most special districts with land-use or transportation-related responsibilities – such as transportation authorities, transit agencies, regional agencies and park districts – also have bicycle-supportive policies. Recently, policies that ensure that the needs of bicyclists (and pedestrians) are considered in the planning, design and construction of new transportation projects are also improving the landscape for bicyclists (see Appendix C).

Innovative policies on the horizon

Transportation professionals are becoming increasingly aware that policies that prioritize motor vehicles – such as traditional level of service requirements to minimize motor vehicle delay – can inadvertently degrade existing bicycle conditions. As more jurisdictions adopt innovative policies, such as thresholds of significance that establish LOS standards for all modes, conditions for bicyclists should improve.

Adopted bicycle plans

Seven of the nine Bay Area counties, and many cities, have by now adopted bicycle plans, either as separate documents or as combined bicycle/pedestrian plans (see Appendix F). These plans lay out strategies to construct cohesive bikeway networks and encourage bicycling in other ways.

Large and active advocacy community

The Bay Area's bicycle-advocacy community has become one of the country's largest and most effective, with organizations and groups active in every part of the region. These groups place pressure on and assist governmental agencies in making improvements to the region's bicycling environment.

Viable transit network

The Bay Area continues to be one of the most transit-rich regions in the country, allowing cyclists to travel far greater distances than by bicycle alone. The region's transit operators have become increasingly bicycle-friendly, providing greater access for bicycles at stations and aboard transit vehicles (see Chapter 4).

New trail opportunities

Much progress has been made toward securing and developing right-of-way for intercity trails. Opportunities include the Bay Trail, the Iron Horse Trail, the SMART corridor in Sonoma and Marin counties, the Union Pacific/BART right-of-way in Alameda and Santa Clara counties, and a number of canal- and creek-side trails connecting multiple jurisdictions in Santa Clara County.

Bikable destinations

The region has more compelling destinations for bicyclists than ever before,

with revitalized downtowns, new mixed-use neighborhoods, new parks and more-accessible waterfronts, hills and other open spaces. These destinations encourage bicycling and support bikeway networks that connect them.

Political support

The Bay Area's progressive and environmentally aware political and social climate results in public support for bicycle improvements and for new as well as continuing sources of bicycle funding. Increasingly, this support is the result of leadership from motivated locally elected officials.

Creativity and experimentation

The Bay Area's spirit of creativity, inventiveness and open-mindedness allows for experimentation with new types of bicycle improvements. Examples include bicycle boulevards, "sharrows" and bike-route network signage.